

# Review of Monitoring Program and Infrastructure Plan for Cape Cod BMP Project

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Reviewer: Diane Switzer, Regional Monitoring Coordinator, 617-918-8377

I have read "Task 4" material and the Performance Work Statement for this project. It does require its own EPA approved QAPP prior to any monitoring activities in which collected data will be generated. Based upon the plan, I understand a municipality would be the major participant in monitoring, with nutrient and TSS analyses by our Chemistry Lab, and perhaps a monitoring over site role by my Ecology Monitoring Team.

Training: I think we can work with the towns to have training. We may need a meeting or two to discuss and finalize their protocols and work with the sampling setups. If the contractor is able to provide support to the towns in this, including a practice "wet run", that would be helpful for the project success. It can highlight any gaps not yet addressed.

Scoping Meeting: Since we do require a scoping meeting with leads if we participate in any project, it is good to have this as soon as feasible. We can discuss features that are important for the project and for the content of the QAPP. I realize we want to try and reduce having something occur in the implementation stage that was not prepared for during the planning stages. I've briefed Ernie Waterman and Nora Conlon on this, so the Chemistry and QA Offices will be represented at the meeting.

Although some decisions may have already been made as the project plans have developed, I noted some items that might be helpful to keep in mind in designing and scheduling monitoring program content, and in writing the QAPP. These include:

## Ken needs to develop a Monitoring Plan

QAPP: should Contractor help draft the QAPP? Diane: we should be able to develop a QAPP, but Contractor should review and Town should "sign off" on it. Diane and Nora can help. Ernie: build QAPP from "what you need to know"; what are your project needs; what are your metrics? Marcel can work on it in October. Katrina: We don't want to make a lot of trips, but can get involved in training. Mark: target is 20 storms.

1. With Lynne's recent email, and the PWS, it seems that towns are able to handle the basic water quality monitoring themselves. Details of their activities need to be in the QAPP. If our sondes are needed for 2015, at least one person on my team will be installing and servicing them. At this point, we are not able to provide them for a longer term.
2. We will be able to dedicate two autosamplers for 2015, but not for long-term. A complete setup of an ISCO brand autosampler, plus flowmeter and rain gage setups cost about \$5,500 each. Town personnel can operate our samplers, if they are needed in 2015. Lab could purchase autosamplers with capital equipment \$. If we buy, we could have loan agreement with muni, or have contractor return it to us. Or have Contractor buy it, and then return it. Basic water quality measurements using Sondes. One instrument with multiple sensors: DO, conductivity, ORP, . . . [Diane to get me some more info on this]. 8-9k each. Sondes need to

be serviced every two weeks, and the muni can be trained to manage the sondes. Muni's routinely do this sort of work, so get Muni input.

3. A drawing of the proposed shed, and sampling areas would be helpful, when available, in planning how to arrange equipment, and the frequency of servicing outside of storm events.
4. The plan should indicate whether to have the autosamplers collect individual grab samples or one flow-composite sample for each site during an event.
5. Generally flow-composited samples have less volume than other composites, so it will be important to determine if chemistry sample volume requirements are met for those storms causing fluctuating flows. Prioritizing sample analyses would be helpful if this event does occur. I do think it's unlikely, and that volumes should be sufficient, but it helps to plan for it.
6. Are there specific nutrients of interest or is this something that can be discussed at the scoping meeting?
7. While there is the full list of what NERL's chemistry lab may be able to provide, there should be a discussion soon regarding arrangements, particularly with regard to contract labs.
8. It seems that towns are willing to collect and analyze bacteria samples. With storm events, sampling at night would need to be worked out with lab staff for each event, in order to arrange for sample processing.
9. What are the criteria for storm events that should trigger monitoring? Is there a minimum rainfall, or should the presence of any runoff trigger the monitoring event? What is the antecedent dry period, if one is preferred?
10. How will the BMP be checked for proper installation, and how will it be maintained over the course of time? Who and how will verification of these be done? Once a decision on a BMP is made, is there a checklist of features that is specific enough to determine proper maintenance? This is important for assessing the analytical results. And monitoring staff who service the samplers and meters should do a quick visual check as backup to those assigned to maintain the BMP overall.

If a scoping meeting is possible next week, Monday, Tuesday afternoon and Wednesday morning are the only times which are **not** good for me, Ernie Waterman and Nora Conlon. I have forwarded information to them in preparation for our discussion. We can have it by phone, in person, or a combination based on what works well for everyone.

Thank you for requesting review of the draft PWS.